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(54) **THERAPEUTIC POLYNUCLEOTIDES,
COMPOSITIONS, AND METHODS**

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(58) **Field of Classification Search**

None

See application file for complete search history.

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ABSTRACT

This disclosure describes, in one aspect, a composition that
generally includes an xNA molecule comprising at least six
nucleotides, in an amount effective to improve at least one
indicator of myocyte function and a pharmaceutically
acceptable carrier. In another aspect, this disclosure
describes a method of treating cardiac disease. Generally,
the method includes administering to a subject a composi-
tion that includes an xNA molecule having at least six
nucleotides, in an amount effective to improve at least one
indicator of myocyte function, and a pharmaceutically
acceptable carrier. In another aspect, this disclosure
describes a method for evaluating the efficacy of treatment
of cardiac disease. Generally, the method includes admin-
istering to a subject a composition that includes a first xNA
molecule comprising a predetermined length in an amount
effective to increase myocyte relaxation, then selecting a
predetermined length of a second xNA molecule for at least
one subsequent treatment. If treatment with the first xNA
results in more myocyte relaxation than is desired, then the
predetermined length of the second xNA molecule is shorter
than the predetermined length of the first xNA. If, on the
other hand, treatment with the first xNA results in less
myocyte relaxation than is desired then the predetermined
length of the second xNA molecule is longer than the
predetermined length of the first xNA.

14 Claims, 20 Drawing Sheets